SUNFORCE®

15 WATT SOLAR 12 VOLT BATTERY CHARGER KIT

User's Manual

15 Watt Solar 12 Volt Battery Charger and 7 Amp Charge Controller Kit
Solar Power Panel
15 Watt/ 1 Amp
Read this manual BEFORE and DURING the use of this product

Specifications and Included Items:
Power Rating: Up to 15Watts
Current: 1Amp @ 15V
Includes 7 Amp Charge Controller, 12 Volt DC Plug, Alligator Clamps, 11.5ft Wire, Solar Panel, 4 Stainless Steel Mounting Screws,

Installation
Solar Panel
Securely place the solar panel in the sun. If permanent installation is desired, use the included four stainless steel mounting screws. To allow for heat dissipation, use a heat-resistant spacer between the panel and the surface, such as the rubber washers included.

7 Amp Charge Controller
Connect to Battery:
Attach the Battery Charge Controller positive (+) wire to the positive (+) battery terminal. Then connect the Battery Charge Controller negative (-) wire to the negative (-) battery terminal. WARNING: The alligator clips MUST be placed on to the battery in the aforementioned order—wrong connections may cause sparking or explosion.

Connect to Solar Panel:
Strip the solar panel wires. Connect positive (+) wire from the solar panel to the positive (+) of the charge controller and the negative (-) wire from the solar panel to the negative (-) of the charge controller. Ensure the connections are secure.

Operation:
The Green LED indicates a full-charged battery. When the battery reaches 14.2 V, the Solar Charge Controller will cut out voltage thereby ensuring no overcharging. Yellow light indicates a battery that is being charged. When the battery reaches 13 V, the Battery Charge Controller will cut-in and begin charging.

NOTE:
This solar panel has a built-in blocking diode that protects the battery from reverse discharge.

FAQ

What type of batteries does this panel charge?

All rechargeable 12V batteries such as those used in Cars, Boats, RV's, Motorcycles and PWC's.

Can I use this solar panel outdoors?

Yes, this solar panel is weatherproof. The weatherproofing includes UV protection and protects from weather effects of -35°F-175°F (-37°C - 79°C).

How long does it take to charge a battery?

This solar panel can generate 1 Amp per hour under ideal conditions. For example, under ideal conditions, the panel will generate 15 Watts x 7 hours x 7 days per week for a total of 735 Watts of power. You can connect multiple panels together to decrease overall charging time. By adding a second panel of the same output you will double your output and half the length of the charge time.

How can I run AC appliances with my Solar Power Panel?

You may connect the battery to a power inverter (sold separately) that converts DC power to AC power and run your appliances from the inverter.

Can I overcharge my battery?

Yes, a Sunforce 7 Amp Solar Charge Controller must be used to prevent battery from overcharging.

Can I extend the wire from my solar panel to the charge controller?

Without loss of power or voltage the 11.5' wire may be extended to a maximum length of 25' with 16 gauge wire. Ensure proper connections.

How do I know if the panel is working?

To measure the voltage of the panel use a voltmeter. The voltage reading should be between 16 and 25 Volts in full sun.

Can I start/drive my vehicle while the unit is connected to the battery?

No, for safety reasons please make sure the panel is not in use while you are using your vehicle.

How many panels can I connect to my 7 Amp Solar Charge Controller?

You can connect up to 105 Watts of Solar Power to the 7 Amp Solar Charge Controller. Panels should be connected in parallel – positive to positive, negative to negative.

When will the Charged Indication light (green) light up?

The charged indication green light will light up when the battery voltage reaches 14.2 Volts and the SCC will prevent the solar panels from overcharging the battery. It is normal for the SCC LED to light on and off as the battery voltage cuts in and out.

NOTES:

• It is normal for both lights to flicker on and off during normal operation. The Battery Charge Controller should be placed within 5' of the battery in a dry, well-ventilated area. This Battery Charge Controller can support up to 105 W and up to 7 A of array current. All connections should be parallel to ensure 12 V system (positive to positive and negative to negative).

TROUBLESHOOTING

Problem:

My panel is not functioning.

- Ensure battery is operational
- Ensure that the distance of the wires is not longer than 25' and all connections are secure.

GENERAL TESTING PROTOCOL

Always test outdoors under optimal sunlight

Test Solar Panel for Voltage

Connect Voltmeter to the panel separately from the charge controller and observe Open Voltage. Open Voltage can range from 16 Volts to 24 Volts.

Test Connection to Charge Controller for Voltage.

Reconnect solar panel, and connect to charge controller as per instructions. Measure the Open Circuit Voltage at the battery side of the charge controller. Open circuit voltage should read 5-10% lower than without charge controller. Open circuit measurement will read between 15 and 23.5.

Connect charge controller to battery
First, disconnect solar panels and connect charge controller to battery. Always connect charge controller to battery first and remove last. Observe polarity – positive to positive and negative to negative.

Reconnect Solar Panels to Charge Controller
If battery voltage is 14.2 or higher, the GREEN light should be on. If battery voltage is between 13 and 14.2, the YELLOW LED should be on. If battery voltage is 13 or lower, the YELLOW LED should be on.

If all testing results within the above indicated ranges, solar system is in acceptable range. If Voltage readings indicate lower ranges, repeat above connections and retest. Finally, it is common to have 12V Battery issues such as dead cells or non-rechargeable battery problems.

Warranty
The 12 Volt Solar Battery Charger is covered by a five year limited warranty. Sunforce Products Inc warrants to the original purchaser that this product is free from defects in materials and workmanship for a period of one year from date of purchase. Power output is warranted for five years from date of purchase.
The 7 Amp Solar Charge Controller is covered by a five year limited warranty. Sunforce Products Inc warrants to the original purchaser that this product is free from defects in materials and workmanship for a period of one year from date of purchase.
To obtain warranty service please contact Sunforce Products for further instruction, at 1-888-478-6435 or email info@sunforceproducts.com. Proof of purchase including date, and an explanation of complaint is required for warranty service.

For more information or technical support
Pour plus d'information ou support technique

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